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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/409,659	09/30/1999	FUJIO OKADA	0250-776	5699
27383	7590	01/15/2004		
CLIFFORD CHANCE US LLP 200 PARK AVENUE NEW YORK, NY 10166				
			EXAMINER MISLEH, JUSTIN P	
			ART UNIT 2612	PAPER NUMBER 11

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/409,659

Applicant(s)

OKADA ET AL.

Examiner

Justin P Misleh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 16 October 2003 have been fully considered but they are not persuasive.
2. The Applicant argues that Yamanaka et al. (US 6,078,353) fails to teach a third memory for converting an interlaced image signal to a non-interlaced image signal. Claims 1 and 2 do not require a third memory for converting an interlaced image signal to a non-interlaced image signal rather they require a third storing means for storing the sequential scan imaging signal.
3. Yamanaka et al. disclose a sequential scanning means (CPU 25) for obtaining a sequential scan imaging signal by repeatedly reading out the imaging signal for each line stored in the first storing means and the imaging signal for each line stored in the second storing means, in alternating sequence (As shown in figure 2, the mixer (24) combines an even-numbered line with a subsequent odd-numbered line and then combines an odd-numbered line with a subsequent even-numbered line, according to operation under control of the CPU. Therefore, the imaging signals stored in the first storing means and second storing means are read out in an alternating sequence.). The sequential scan imaging signal is processed by both the 1st DVP (26) and the 2nd DVP (28) before it is stored in the third storing means (comprised of memories 29 and 30). Thus, the sequential scan imaging signal is stored in a third storing means.
4. As a result of the Applicant's amendments, the Examiner withdraws all objections to the specification, drawings, and abstract.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1, 2, 4/1, 4/2, 5/1, and 5/2** are rejected under 35 U.S.C. 102(e) as being anticipated by Yamanaka et al. (US 6,078,353).

7. For **claim 1**, Yamanaka et al. disclose, as shown in figures 1, 2, and 4, and as stated in columns 5 (lines 43 – 67) and 6 (lines 1 – 51), an imaging device comprising:

an imaging element (CCD 15), wherein a plurality of pixels are arranged in a plurality of lines, which is capable of reading out imaging signals captured by means of said pixels, line by line (see column 5, lines 55 – 64);

light exposure controlling means (light source device 13) for alternately repeating steps of exposure and non-exposure of said imaging element to light (see timing diagram of figure 4);

driving means (18, 19 , and 20) for driving said imaging element in such a manner that an imaging signal is output for the pixels in each line of one of either the odd-numbered lines or the even-numbered lines (see column 5, lines 55 – 64), from the pixels in said plurality of lines, for a prescribed time period after said exposure (in figure 4a and 4c), whereupon an imaging signal is output for the pixels in each line of the other of either the odd-numbered lines or the even-numbered lines , before the subsequent exposure (the odd-numbered lines and even-numbered are captured in a single exposure);

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first storing means (22) for storing an imaging signal for each of said one group of lines (odd);

second storing means (23) for storing an imaging signal for each of said other group of lines (even); and

sequential scanning means (CPU 25) for obtaining a sequential scan imaging signal by repeatedly reading out the imaging signal for each line stored in said first storing means and the imaging signal for each line stored in second storing means, in alternating sequence (As shown in figure 2, the mixer (24) combines an even-numbered line with a subsequent odd-numbered line and then combines an odd-numbered line with a subsequent even-numbered line, according to operation under control of the CPU. Therefore, the imaging signals stored in the first storing means and second storing means are read out in an alternating sequence.); and a third storing means (29 and 30) for storing said sequential scan imaging signal.

The sequential scan imaging signal is processed by both the 1st DVP (26) and the 2nd DVP (28) before it is stored in the third storing means (comprised of memories 29 and 30). Thus, the sequential scan imaging signal is stored in a third storing means.

8. For **claim 2**, Yamanaka et al. disclose, as shown in figures 1, 2, 4, and 10A, and as stated in columns 5 (lines 43 – 67) and 6 (lines 1 – 51), an imaging device comprising:

an imaging element (CCD 15), wherein a plurality of pixels are arranged in a plurality of lines and a plurality of color filters for pixel binning are positioned in units of said pixels (see figure 10A and column 5, lines 48 – 52 and 55 - 64) , which is capable of reading out imaging signals captured by means of said pixels, line by line;

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light exposure controlling means (light source device 13) for alternately repeating steps of exposure and non-exposure of said imaging element to light (see timing diagram of figure 4);

driving means (18, 19 , and 20) for driving said imaging element in such a manner that an imaging signal is output for the pixels in each line of one of either the odd-numbered lines or the even-numbered lines (see column 5, lines 55 – 64), from the pixels in said plurality of lines, for a prescribed time period after said exposure (in figure 4a and 4c), whereupon an imaging signal is output for the pixels in each line of the other of either the odd-numbered lines or the even-numbered lines , before the subsequent exposure (the odd-numbered lines and even-numbered are captured in a single exposure);

first storing means (22) for storing an imaging signal for each of said one group of lines (odd);

second storing means (23) for storing an imaging signal for each of said other group of lines (even); and

sequential scanning means (CPU 25 and mixer 24) for obtaining a sequential scan imaging signal by repeatedly using, in alternating sequence, a pixel-binned signal for a first binning line (as shown in figures 2D and 2E), wherein the imaging signal for the pixels of each even-numbered line (figure 2C in second storing means 23) is combined with the imaging signal for the pixels of each subsequent odd-numbered line (figure 2B in first storing means 22) which correspond to the pixels of said even-numbered line (see Odd field in figure 2D), and a pixel-binned signal for a second binning line, wherein the imaging signal for the pixels of each odd-numbered line (figure 2B in first storing means 22) is combined with the imaging signal for the pixels of each subsequent even-numbered line (figure 2C in second storing means 23) which

correspond to the pixels of said odd-numbered line (see Even field in figure 2E); and a third storing means (29 and 30) for storing said sequential scan imaging signal.

The sequential scan imaging signal is processed by both the 1st DVP (26) and the 2nd DVP (28) before it is stored in the third storing means (comprised of memories 29 and 30). Thus, the sequential scan imaging signal is stored in a third storing means.

9. As for **claims 4/1 and 4/2**, Yamanaka et al. disclose, as shown in figures 1, 2, 4, and 10A, and as stated in columns 5 (lines 43 – 67) and 6 (lines 1 – 51), the imaging device further comprising enlargement and reduction processing means (second DVP 28) for implementing enlargement and reduction processing of the image on the basis of said sequential scan imaging signal (see column 6, lines 46 – 52).

10. As for **claims 5/1 and 5/2**, Yamanaka et al. disclose, as shown in figures 1, 2, 4, and 10A, and as stated in columns 5 (lines 43 – 67) and 6 (lines 1 – 51), the imaging device further comprising scan converting means (29 – 33) for generating a sequential image signal for a personal computer interface, or the like, or an interlaced scan image signal for a TV system or the like, on the basis of said sequential scan imaging signal (see column 6, lines 47 – 61).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. **Claims 3/1 and 3/1** rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka et al. (US 6,078,353).

13. For **claims 3/1 and 3/2**, Yamanaka et al. disclose, as shown in figures 1, 2, 4, and 10A, and as stated in columns 5 (lines 43 – 67) and 6 (lines 1 – 51) disclose, a second DVP (28) for accepting the sequential scan imaging signal to control of the position of an image, the enlargement of an image, the formation of a mirror imager, etc. However, Yamanaka et al. do not explicitly disclose, outline enhancement processing for implementing outline enhancement processing on the basis of said sequential scan imaging signal. Since, outline enhancement processing provides cleans image edges when viewing still images and can be simply performed with a digital video (signal) processor, one with ordinary skill in the art would have been motivated to also include outline enhancement processing in addition to the enlargement, position control, and mirroring processing functions already performed in the second DVP as taught by Yamanaka et al. Therefore, at the time the invention was made, it would have been obvious to one with ordinary skill in the art, to have also included outline enhancement processing in the second DVP of Yamanaka et al.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

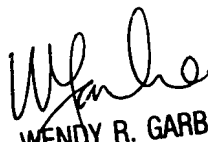
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin P Misleh whose telephone number is 703.305.8090. The examiner can normally be reached on Monday - Thursday from 7:30 AM to 5:30 PM and on alternating Friday from 7:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R Garber can be reached on 703.305.4929. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703.306.0377.

JPM
January 12, 2004


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600